that female children vaccinated early prepubertally may not necessarily be clinically immune to rubella when they reach child-bearing ages. For this reason, HI testing of teen and adult women should be performed as recommended above regardless of history of infection or immunization, while further clinical investigations are being completed.

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REFERENCES

Krugman S: The present status of rubella immunization, *In* Year Book of Obstetrics and Gynecology 1971. Chicago, Year Book Medical Publishers, 1971, pp 163-169

Scott HD, Byrne EB: Exposure of susceptible pregnant women to rubella vaccines. JAMA 215:609-612, Jan 25, 1971

Maeck JV, Phillips CA: The rubella vaccine program: Its implications in obstetric practice. Am J Obstet Gynecol (in press)

Pelvic Pneumography

Pelvic pneumography is a simple, radiographic procedure which provides an excellent image of the external contours of the uterus, the ovaries and their supporting ligaments. It is accomplished by introducing approximately 1,200 ml of nitrous oxide into the peritoneum via transabdominal needle puncture. With the patient in a prone inverted position on the radiographic table, the bubble rises in the pelvis to surround the reproductive organs. Appropriate films are taken. The examination is particularly useful in assessing patients who cannot be satisfactorily examined bimanually, those who have equivocal abnormalities, in differentiating uterine from ovarian lesions, and in assessing certain causes of infertility.

The primary virtues of the procedure are its simplicity and relatively low cost, coupled with a high yield of useful information. Examinations can be conducted on outpatients. No serious complications have occurred in over 2,500 examinations.

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REFERENCES

Stevens GM, Weigen JF, Lee RS: Pelvic pneumography. Med Radiogr Photogr 42:82-93, 1966

Stevens GM: Pelvic pneumography in the assessment of infertility. Radiol Clin North Am 5:87-103, Apr 1967

Fetal Growth Retardation

Approximately one-third of low birth weight infants (less than 2500 grams) are not premature, but are term infants who are small for their gestational age (SGA). One-fifth of these infants have congenital anomalies or congenital infections. Seven percent are a result of multiple pregnancy, and 20 to 25 percent occur in mothers with cardiovascular or renal disease. In the remaining 50 percent the cause of fetal growth retardation is obscure.

During pregnancy fetal growth retardation can be suspected when the uterine fundus measured from the symphysis pubis with a tape-measure (McDonald measurement) indicates inadequate uterine growth. Antepartum death is eight times higher than normal in these patients and intrapartum death is much more likely than in normal patients. Normal 24-hour urine estriol and clear amniotic fluid (amniocentesis or amnioscopy) establish that the fetus is in no danger *in utero* for the time being.

The neonatal course may be complicated by meconium aspiration, polycythemia, hypoglycemia, hypocalcemia, pulmonary hemorrhage, or hypothermia. When a low-birth weight infant whose gestational age by examination confirms the suspicion of an SGA infant and the placenta is of normal size (450 to 500 grams) congenital defects should be suspected.

The prognosis for infants with intrauterine growth retardation, even those who do not have congenital abnormalities or intrauterine infections (rubella, cytomegalic inclusion disease, etc.), is still in question. Their weight, height, and head circumference do not reach normal levels with the first year, and long-term studies suggest that the intellectual development lags behind that of babies who have weights appropriate for their gestational age.

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REFERENCES

Bard H: Intrauterine growth retardation. Clin Obstet Gynecol 13: 511-525, Sep 1970

Battaglia FC: Intrauterine growth retardation. Am J Obstet Gynecol 106:1103-1114, Apr 1970